

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 106 through 117 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicant's specification as originally filed does not clearly suggest all of the intumescent compositions of the claims as currently amended. Applicant states that support for the currently amended claims may be found at page 10, lines 3- 7 of the specification. However the specification only suggests the intumescent composition blends of ethylene diamine phosphate and melamine phosphate. The remaining intumescent composition blends of the claims are not fully described by the specification

3. This is a new matter rejection. Cancellation of the new matter is required.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 106-117 are rejected under 35 U.S.C. 103(a) as being unpatentable over Keogh, US PG Publication 2002/0098357 in view of Lindsay et al, US Patent No. 5,409,976.

6. Keogh discloses a fire and thermal insulative wrap for protecting building wires and cables comprising a layered construction of a support substrate and a coating, thereon, of a polyolefin and an intumescent material. [0012]. Intumescent additives include melamine phosphate, melamine pyrophosphate, ammonium polyphosphate, melamine and ethylene diamine phosphate blended with melamine. [0033] through [0040]. Patentee specifically discloses at paragraph [0040] a blend of ethylene diamine phosphate (AC-3) and melamine (AC-3). These intumescents are impregnated into support tapes or wraps that may be formed from polyolefin [0030].

7. Since Keogh has equated all of the intumescent components their combined use is expected to result in an at least additive effect. Therefore their combined use is obvious in that applicant has not shown that he is achieving anything of an unexpected nature by combining these flame retardants. Claim 4 of Keogh provides for the combined use of these components.

Lindsay et al discloses a flame-retardant additive comprising a source of phosphorus and a polymer or oligomer, P/N, having repeating units selected from those represented by general formulae (I) and (II) as set forth at col. 3.

The combination of the P/N compound and a second source of phosphorus is found to have a synergistic or super-additive effect on the level of flame-retardancy achieved for a given polymer system when compared with that obtained for each of the components used alone. The flame-retardant additives of the invention are prepared by blending the P/N compounds with an additional source of phosphorus.

The second source of phosphorus may comprise any inorganic or organic phosphorus source known in the art which (in the concentration used) does not deleteriously affect the properties of the polymer to which it is added. Preferred examples of the second phosphorus source comprise ammonium polyphosphate (commercially available under the trade name PHOSCHEK P-30 from Monsanto), melamine phosphate (commercially available under the trade name AMGARD NH from Albright and Wilson) and red phosphorus. The flame-retardant additives of the invention are compatible with a variety of polymers-applicable for wire and cable insulation, heat recoverable items, translucent films and molded parts.

Due to the high thermal stability of the flame-retardant additive of the present invention, it is possible to impart flame-retardant properties to a wide range of polyolefins and other polymer materials. Preferred polymer materials include low density poly(ethylene) (LDPE), poly(ethylene-ethyl acrylate) (EEA), poly(ethylene-acrylic acid) (EAA), poly(ethylene-vinyl acetate) (EVA), poly(propylene) (PP), ethylenepropylene-diene monomers (EPDM) and copolymers thereof.

See claims 1, 16, 19 and 21, col. 2, lines 60-68, col. 3, line 62 through col. 4, line 2, col. 5, line 62 through col. 6, line 11 and col. 14, Example 10 of Lindsay.

Lindsay teaches the formation of cables from the patented compositions. The patented compositions are disclosed to comprise typical phosphorus sources such as melamine phosphate blended together with polyolefins. Formulation of a composition or cable insulation comprising the melamine phosphate and polyolefin of Lindsay at the weight amounts and ratios suggested by the either of the references relied upon would have been obvious to one of ordinary skill in the art at the time of applicant's invention. Since Lindsay et al teaches that cable insulation is

formed from polyolefin material having intumescent compounds incorporated therein. Formulation of such cable insulation utilizing the intumescent blends of Keogh would have been obvious to one of ordinary skill in the art at the time of applicant's invention.

***Response to Amendment***

1. The reply filed on 5/19/2009 is not fully responsive to the prior Office Action because of the following omission(s) or matter(s):
2. Newly amended claims 106 through 117 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:
3. All claims are now directed to a non-halogenated resin composition comprising an intumescent flame retardant comprising a blend of a first and second compound. Applicant's invention as originally presented was directed to a non-halogenated resin composition comprising an intumescent flame retardant comprising only a first compound. Applicant's inclusion of a second compound presents a new invention for examination that is patentably distinct from the invention originally presented for examination. This new invention is classified and searched in an area other than the invention originally presented for examination. This new invention is capable of supporting a patent that is separate from the invention originally presented for examination.

Applicant has received an action on the merits for the originally presented invention, therefore, the original invention has been constructively elected by original presentation for prosecution on the merits. See 37 CFR 1.142(b) and MPEP § 821.03.

4. The amendment filed on 5/19/2009 amending all claims drawn to the elected invention and presenting only claims drawn to a non-elected invention could be construed as non-responsive (MPEP § 821.03).

5. . See 37 CFR 1.111. Since the above-mentioned reply appears to be *bona fide*, search and examination have been extended to cover the newly presented invention only in this instance. Future claim amendments that deviate from the originally claimed invention will be held as non-responsive and will not be examined in this application.

***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kriellion A. Sanders whose telephone number is 571-272-1122. The examiner can normally be reached on Monday through Thursday 8:30am-7:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kriellion A. Sanders/

Primary Examiner, Art Unit 1796

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